



Learn Microsoft Access Part 5

Previously...

...joined two tables

...joined a table and a query

...created relationships (joins)

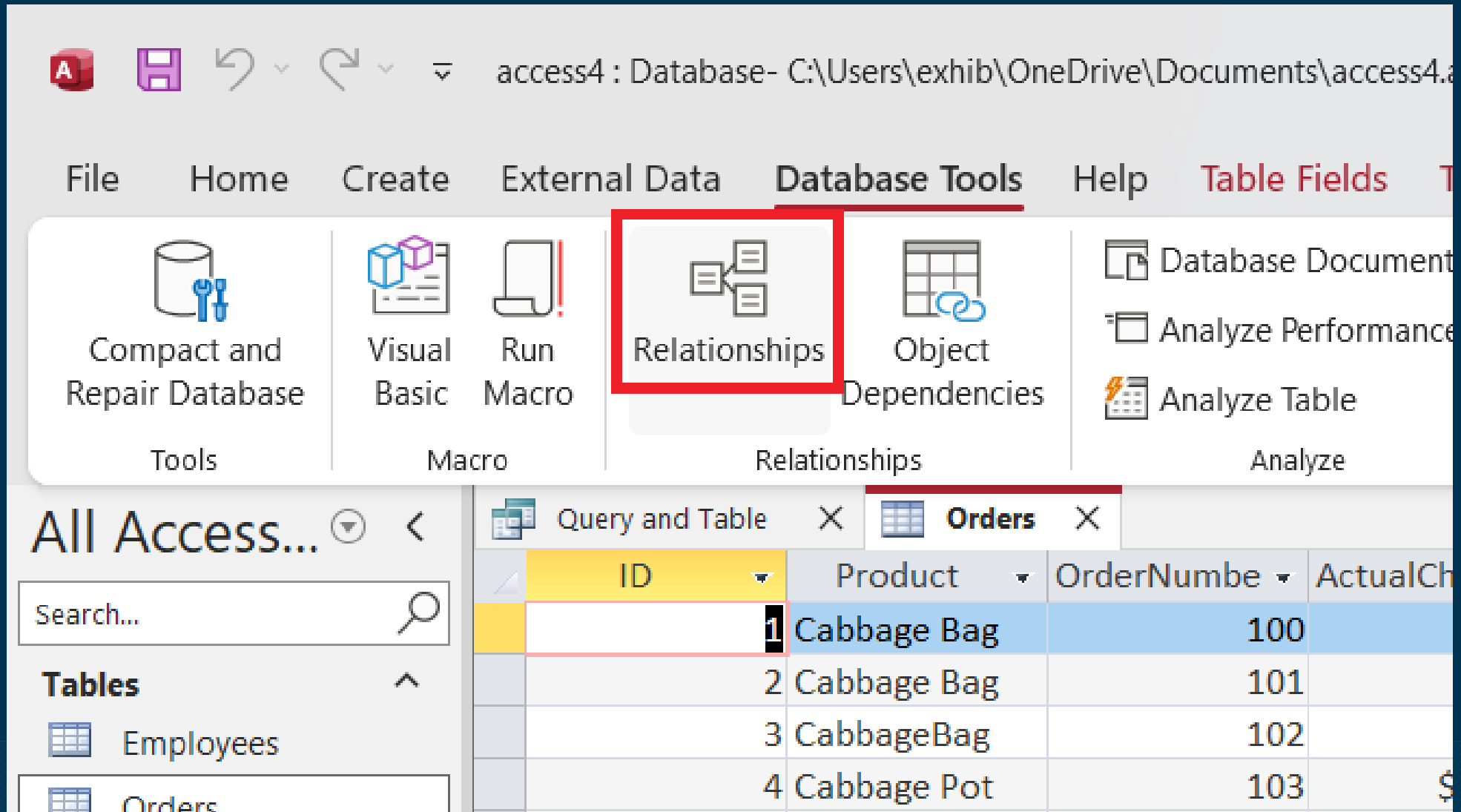
...learned about different types of join

Today...

...relationship diagrams for entire database

...differing types of relationship.

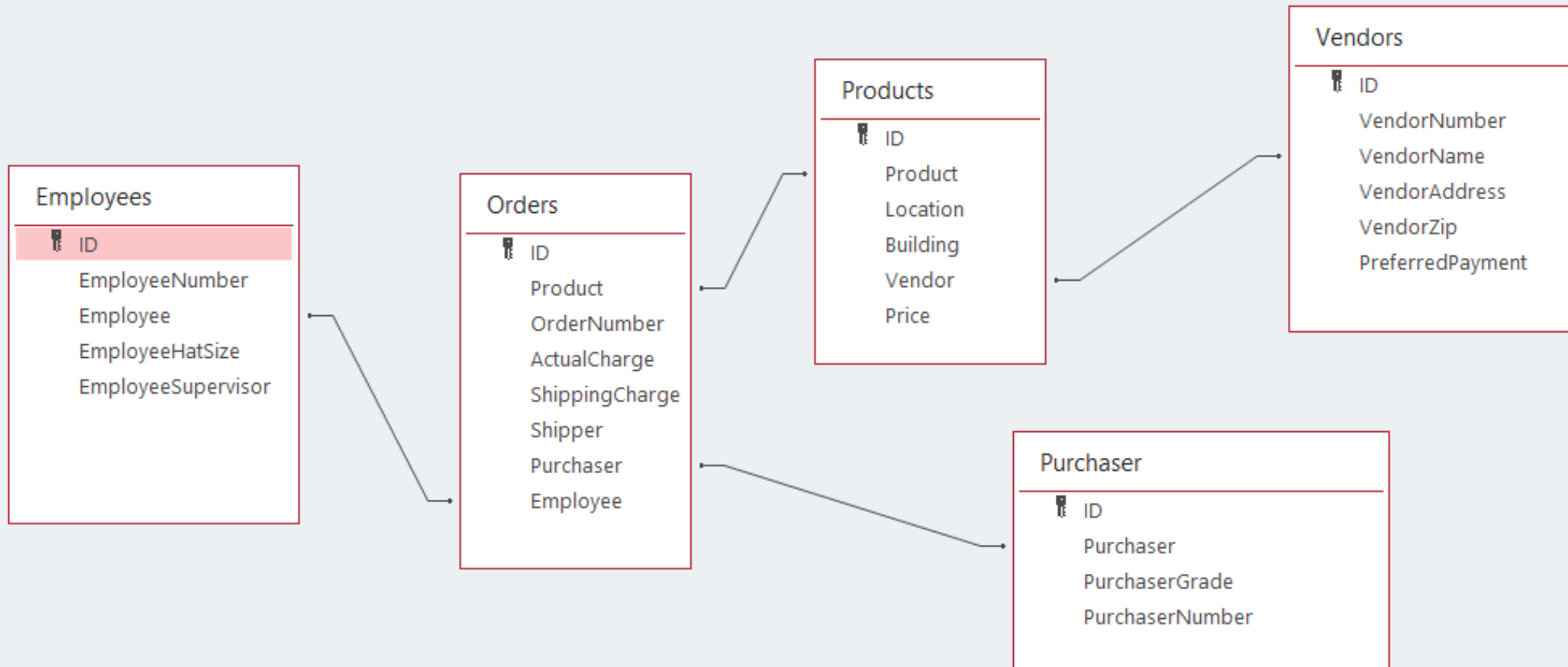
Relationship Diagram For Entire Database



The screenshot shows the Microsoft Access interface. The 'Database Tools' ribbon is active, and the 'Relationships' icon is highlighted with a red box. The 'All Access Objects' task pane on the left shows the 'Tables' section with 'Employees' and 'Orders' listed. The 'Orders' table is selected, and its data is displayed in the main window.

ID	Product	OrderNumber	ActualCh
1	Cabbage Bag	100	
2	Cabbage Bag	101	
3	CabbageBag	102	
4	Cabbage Pot	103	\$

Tables Linked Together By Shared Column Relationships



If A Table Has No Joins, It Doesn't Show Up In Relationship Diagram.

ard	IS	Sort & Filter	Records	Find
Charity List X		Relationships X		
ID	Donor	DonorAmour	ThankYouNo	Click to Add
1	Tim Curry	\$1,000.00	<input checked="" type="checkbox"/>	
2	Jackie Blue	\$100.00	<input type="checkbox"/>	
3	Sean Connery	\$220.00	<input type="checkbox"/>	
4	Julie Boole	\$200.00	<input checked="" type="checkbox"/>	
*	(New)	\$0.00	<input type="checkbox"/>	

1. Does not have columns in common with any other table.

2. Does not have any joins with any other table.

3. Table will not appear in relationship diagram unless it is joined.

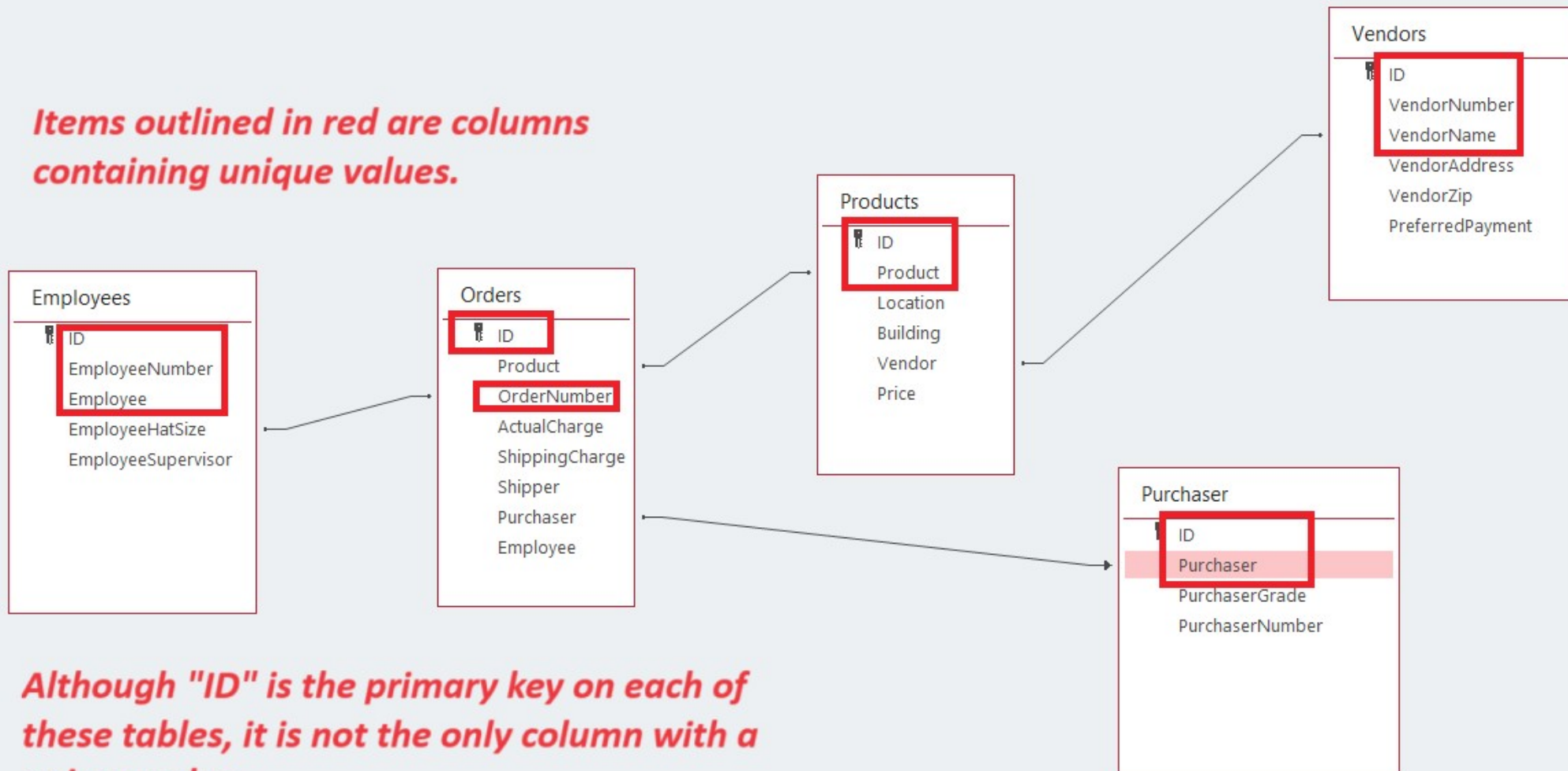
Let's Check It Out!

View Relationships

Table Without Relationships

Columns with unique values in one table will match columns with repeating values in other

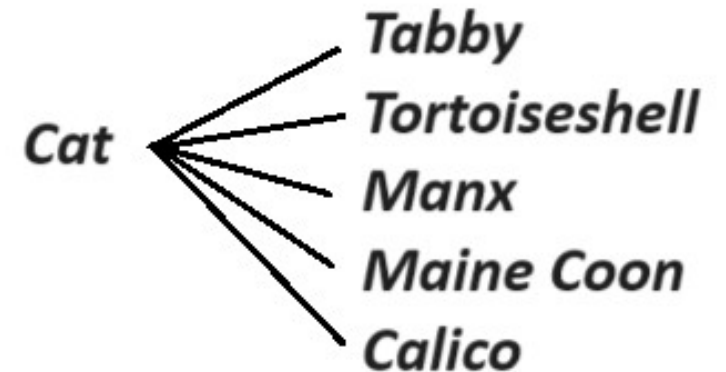
Items outlined in red are columns containing unique values.

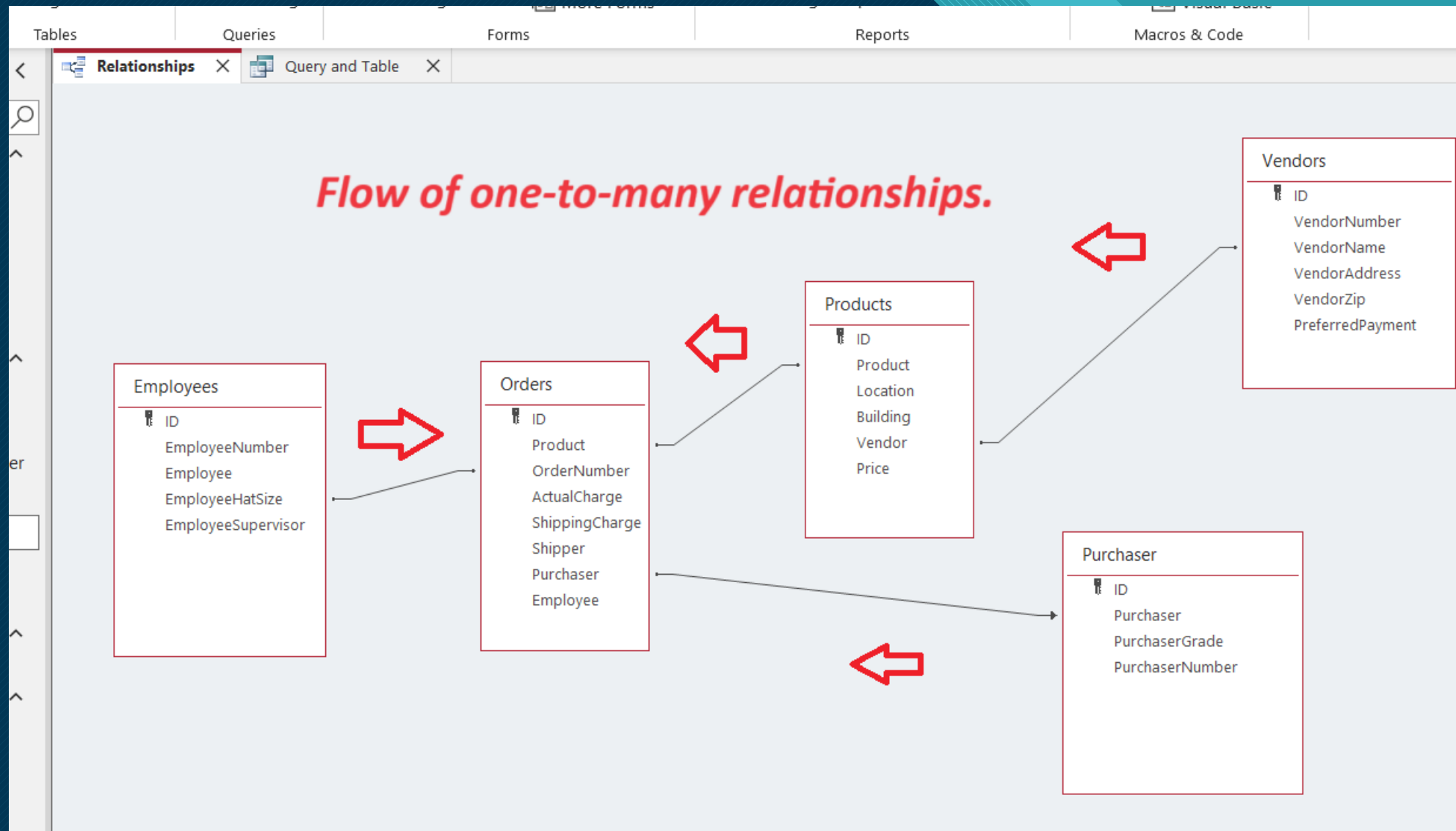


Although "ID" is the primary key on each of these tables, it is not the only column with a unique value.

One-To-Many

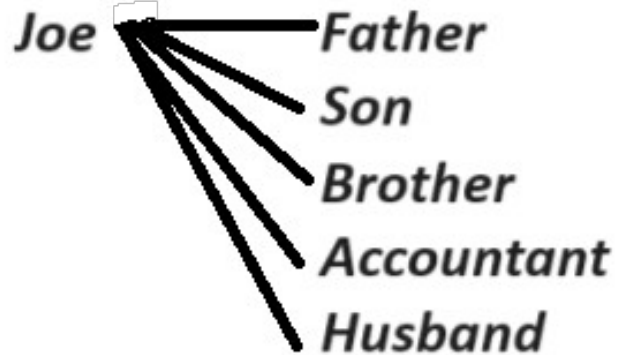
- A query usually has a one-to-many flow, as most queries are usually trying to organize large amounts of information into a smaller number of categories.
- Here, in a one-to-many configuration, a pet can only be of one type.






One-To-Many Relationship.

- Right-hand value in each iteration is a separate and distinct example of the value in the left column.



Joe is connected to five roles: *Father*, *Son*, *Brother*, *Accountant*, and *Husband*. Each role is represented by a line radiating from a central point next to the name *Joe*.



Tammy Hall is connected to four order numbers: *Order 100*, *Order 103*, *Order 106*, and *Order 108*. Each order number is represented by a line radiating from a central point next to the name *Tammy Hall*.

Let's Check It Out!

Query to Report - One To One

Other Types Of Table Relationship

One To One

Many To Many

One-To-One

- Each executive has a name and a title in a one-to-one correspondence.
- There can only be one relation for each pair of items. This is not as common in a database as a one-to-many.

Officer	Title
John	Treasurer
Roy	CTO
Dina	CEO
Mr. Puddles	Office Cat
Pierre	Chef

Many-To-Many

- Each car has different features that can be assigned. Each car can have none, one, more than one, or all features.)



A Many-To-Many Becomes A One-To-Many

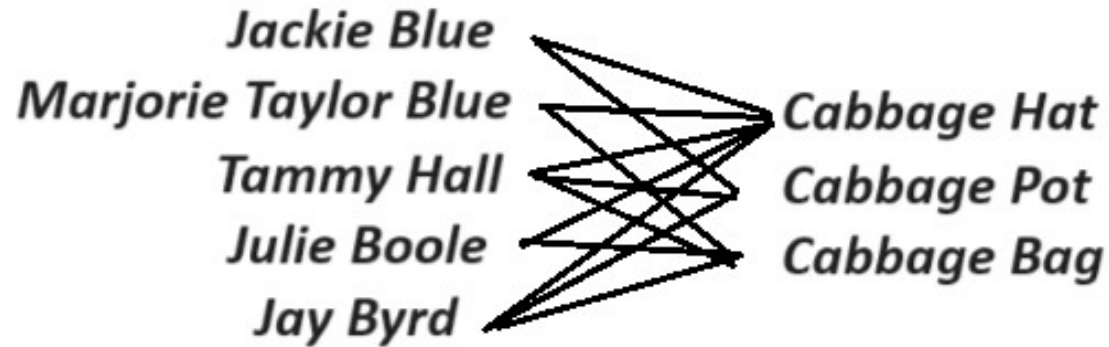
EmployeeNum	Employee	OrderNumbe	Product	Vendor	VendorAddre
2334	Tammy Hall	106	Cabbage Hat	HatCon	123333 Aviator
3455	Marjorie Taylor	107	Cabbage Hat	HatCon	123333 Aviator
2334	Tammy Hall	108	Cabbage Hat	HatCon	123333 Aviator
2334	Tammy Hall	103	Cabbage Pot	Raytheon	4 Bluebell Way
7622	Jackie Blue	104	Cabbage Pot	Raytheon	4 Bluebell Way
7622	Jackie Blue	105	Cabbage Pot	Raytheon	4 Bluebell Way
2334	Tammy Hall	100	Cabbage Bag	CabbageCo	55 E.10th St
377	Jay Byrd	101	Cabbage Bag	CabbageCo	55 E.10th St

Difficult to tell this is a one-to-many relationship, because there is no column by which the data is organized.

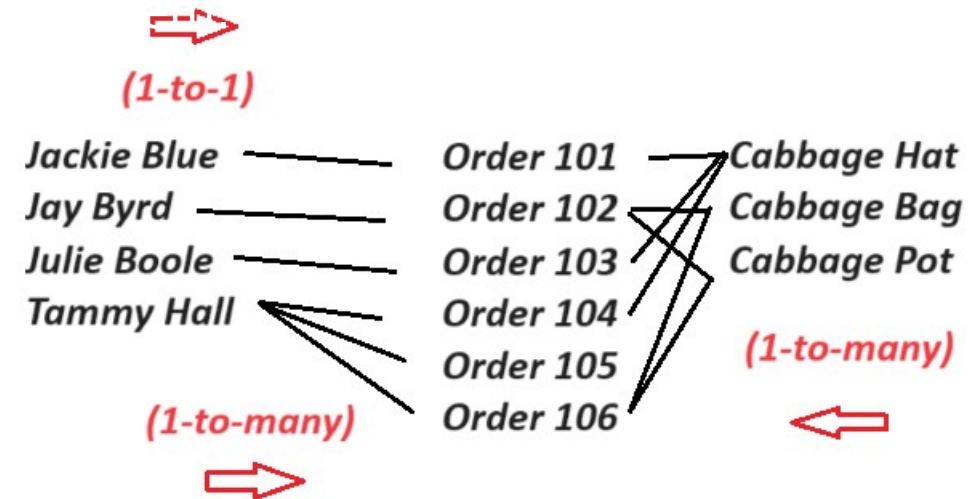
EmployeeNum	Employee	OrderNumbe	Product	Vendor	VendorAddre
377	Jay Byrd	101	Cabbage Bag	CabbageCo	55 E.10th St
2334	Tammy Hall	108	Cabbage Hat	HatCon	123333 Aviator
2334	Tammy Hall	106	Cabbage Hat	HatCon	123333 Aviator
2334	Tammy Hall	103	Cabbage Pot	Raytheon	4 Bluebell Way
2334	Tammy Hall	100	Cabbage Bag	CabbageCo	55 E.10th St
3455	Marjorie Taylor	107	Cabbage Hat	HatCon	123333 Aviator
7622	Jackie Blue	105	Cabbage Pot	Raytheon	4 Bluebell Way
7622	Jackie Blue	104	Cabbage Pot	Raytheon	4 Bluebell Way

Once organized by Employee Number, the one-to-many relation is clearer.

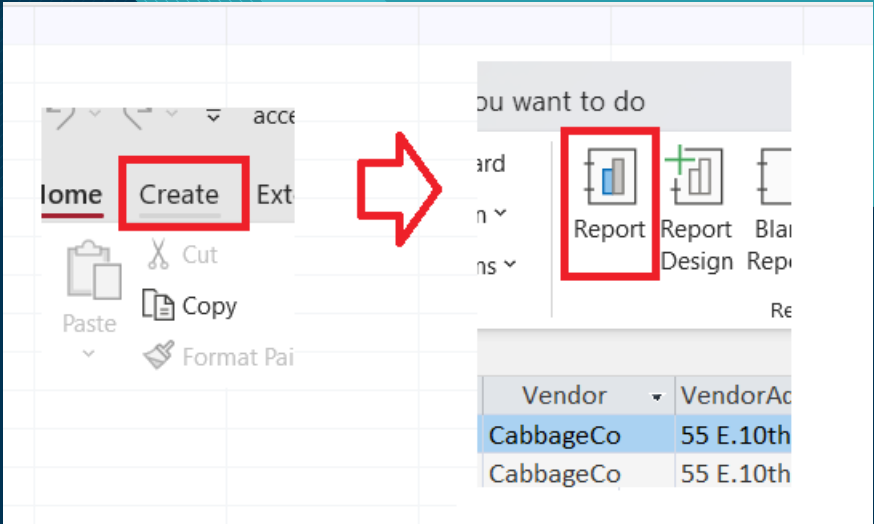
Turn Many-To-Many Into One-To-Many and One-To-One



An intermediate Orders table increases the number of relationships, but also simplifies



Suppressing Duplicates With Report Format



Query1

Wednesday, December 20, 2023 9:35:51 PM

EmployeeNumber	Employee	OrderNumber	Product	Vendor	VendorAddress
377	Jay Byrd	101	Cabbage Bag	CabbageCo	55 E.10th St
2334	Tammy Hall	100	Cabbage Bag	CabbageCo	55 E.10th St
2334	Tammy Hall	103	Cabbage Pot	Raytheon	4 Bluebell Way
2334	Tammy Hall	108	Cabbage Hat	HatCon	123333 Aviation Hwy
2334	Tammy Hall	106	Cabbage Hat	HatCon	123333 Aviation Hwy
3455	Marjorie Taylor Blue	107	Cabbage Hat	HatCon	123333 Aviation Hwy
7622	Jackie Blue	105	Cabbage Pot	Raytheon	4 Bluebell Way
7622	Jackie Blue	104	Cabbage Pot	Raytheon	4 Bluebell Way

8

Page 1 of 1

access4 : Database- C:\Users\exhib\OneDrive\Documents

File Home Create External Data Database Tools Help **Report**

Views Themes Grouping & Totals

All Access... Search...

Tables

- Employees
- Orders
- Products
- Purchaser
- Vendors

Queries

- 3 tables
- 4 tables
- Employee Plus Order
- flawed
- Query and Table

Cut Copy Paste Paste Formatting

Insert Merge/Split Layout

Select Entire Row Select Entire Column

Group On Employee

Total Employee

Sort A to Z Sort Z to A

Clear filter from Employee

Text Filters

Equals "Jay Byrd"

Does Not Equal "Jay Byrd"

Contains "Jay Byrd"

format) - Access

Page Setup Tell me what you want to do

Insert Image

Page Numbers

Header / Footer

Wednesday, December 20, 2023 9:35:51 PM

Vendor

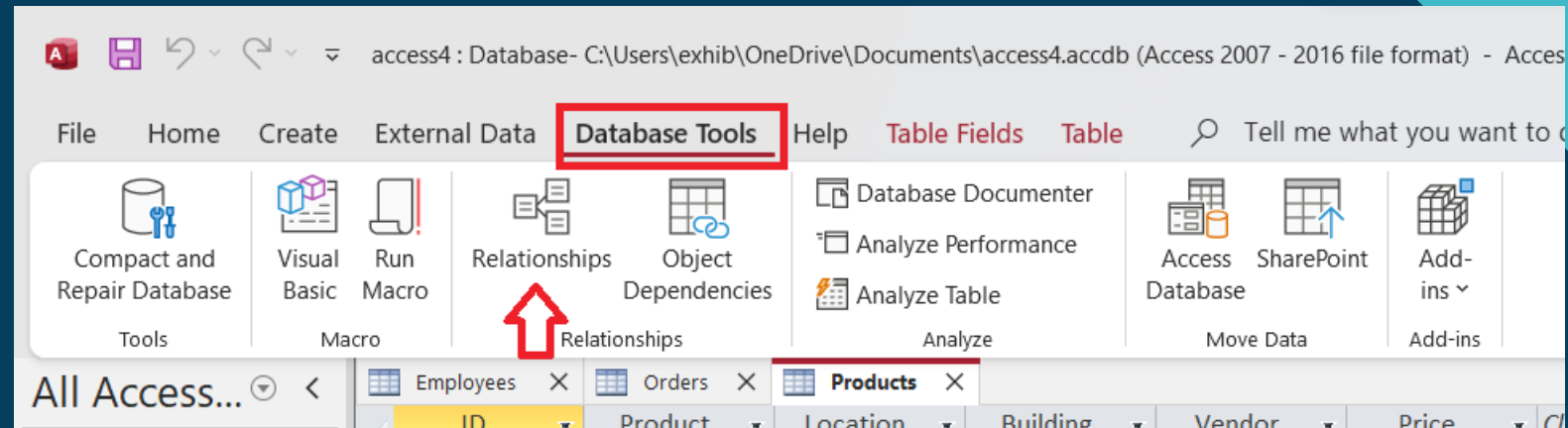
CabbageCo

Query1			
Employee	EmployeeNumber	OrderNumber	Product
Jackie Blue	7622	105	Cabbage Pot
	7622	104	Cabbage Pot
Jay Byrd	377	101	Cabbage Bag
Marjorie Taylor Blue	3455	107	Cabbage Hat
Tammy Hall	2334	100	Cabbage Bag
	2334	103	Cabbage Pot
	2334	108	Cabbage Hat
	2334	106	Cabbage Hat

View And Edit Relationships

View and Edit Relationships

- In Database Tools ribbon
- All relationships in the database
- View and edit joins.



Edit Relationship

The screenshot shows the Microsoft Access Relationships Design view. The ribbon at the top includes the 'Relationships Design' tab, which contains the 'Edit Relationships' button (highlighted with a red arrow), 'Clear Layout', 'Relationship Report', 'Add Tables', 'Hide Table', 'Direct Relationships', 'All Relationships', and 'Close'.

The left sidebar shows the 'All Access...' pane with a search bar and a list of objects:

- Tables**
 - Employees
 - Orders
 - Products
 - Purchaser
 - Vendors
- Queries**
 - 3 tables
 - 4 tables
 - Employees Query
 - Query and Table
- Forms**
 - 3 tables
- Reports**
 - 3 tables

The main workspace displays the following tables and their fields:

- Employees**: ID (Primary Key), EmployeeNum, Employee, EmployeeHat, EmployeeSur.
- Orders**: ID (Primary Key), Product, OrderNumbe, ActualCharge, ShippingChai, Shipper.
- Products**: ID (Primary Key), Product, Location, Building, Vendor.
- Vendors**: ID (Primary Key), VendorNumk, VendorName, VendorAddre, VendorZin.
- Purchaser**: ID (Primary Key), Purchaser, PurchaserGrade, PurchaserNumbe.

Relationships are shown as lines connecting the tables:

- Employees to Orders (1:1 relationship)
- Orders to Products (1:1 relationship)
- Orders to Purchaser (1:1 relationship)
- Products to Vendors (1:1 relationship)

Adding or Changing Relationships In Database Tools is different than in Query Design, having 3 dialog boxes

Edit Relationships

Table/Query: Employees Related Table/Query: Orders

Table/Query	Related Table/Query
Employee	Employee

☐ Enforce Referential Integrity

☐ Cascade Update Related Fields

☐ Cascade Delete Related Records

Relationship Type: Indeterminate

Buttons: OK, Cancel, Join Type.., Create New..

Join Properties

1: Only include rows where the joined fields from both tables are equal.

2: Include ALL records from 'Orders' and only those records from 'Purchaser' where the joined fields are equal.

3: Include ALL records from 'Purchaser' and only those records from 'Orders' where the joined fields are equal.

Buttons: OK, Cancel

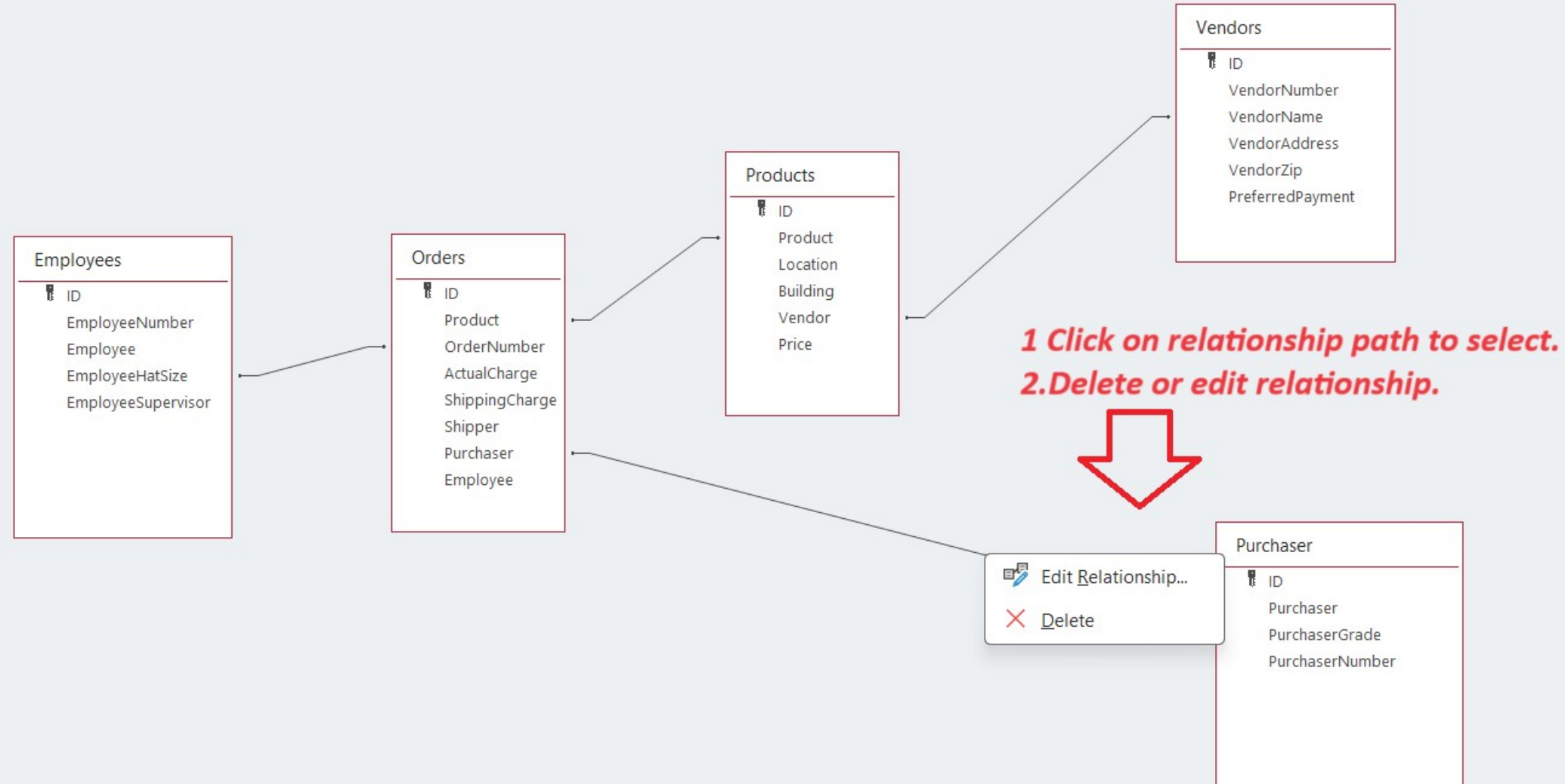
Create New

Left Table Name: Right Table Name:

Left Column Name: Right Column Name:

Buttons: OK, Cancel

...or Select Relationship And Edit/Delete



Thanks For Watching!

- Relationship Diagrams
- One To One And Flow Of Query
- Reports – A Clear Picture of One-To-One
- One-to-One, Many-To-Many

Employees Orders Products Query1

Employees

- ID
- EmployeeNumber
- Employee
- EmployeeHatSize
- EmployeeSupervisor

Vendors

- ID
- VendorNumber
- VendorName
- VendorAddress
- VendorZip
- PreferredPayment

If we made a bad join on two columns, which actually didn't share information...

Field:	EmployeeHatSize	VendorZip							
Table:	Employees	Vendors							
Sort:									
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Criteria:									
or:									

Employees Orders Products Query1

EmployeeHat VendorZip

...we wouldn't get an error message, we'd just get zero returns on our query.

We know that employee Jim Dandy has never made a sale.



How can we make joins that include the necessary info when there is info missing from the column to be joined on?

Two sales have no employee listed.



Employees				
ID	EmployeeNum	Employee	EmployeeHat	EmployeeSup
5	7622	Jackie Blue	7.4	Tyre Pyle
2	377	Jay Byrd	7.9	Roy Poole
10	687	Jim Dandy	6.8	Gina Rosetti
3	3777	Julie Boole	7.1	Gina Rosetti
8	3455	Marjorie Taylor	5.5	Gina Rosetti
1	2334	Tammy Hall	8.9	Tyre Pyle
*(New)				



If all lines from both tables were combined, the Jim Dandy line would have an empty cell for Sales

Orders									
ID	Product	OrderNumbe	ActualCharge	ShippingChar	Shipper	Purchaser	Employee	Click to Add	
11	Cabbage Bag	110	\$33.09	\$4.19	FedEx	Sam Neil			
10	Cabbage Hat	109	\$5.60	\$3.00	FedEx	Tammy Grimes			
5	Cabbage Pot	104	\$19.50	\$4.00	FedEx	Sean Connery	Jackie Blue		
6		105	\$16.77	\$4.50	Purolator	Tammy Grimes	Jackie Blue		
2	Cabbage Bag	101	\$0.99	\$0.87	Purolator	Wil Smith	Jay Byrd		
3	CabbageBag	102	\$2.00	\$0.98	Purolator	Sam Neil	Julie Boole		
8	Cabbage Hat	107	\$7.88	\$2.00	UPS	Ray Theon	Marjorie Taylor		
9	Cabbage Hat	108	\$8.99	\$1.00	Purolator	Ray Theon	Tammy Hall		
1	Cabbage Bag	100	\$1.49	\$0.39	UPS	Sam Neil	Tammy Hall		
7	Cabbage Hat	106	\$8.77	\$4.00	UPS	Tammy Grimes	Tammy Hall		
4	Cabbage Pot	103	\$44.77	\$1.99	FedEx	Tim Curry	Tammy Hall		
*(New)									



Some joins will not recognize nor include lines where Employee cell is empty.

Join two tables
on common
column
Employee.

Query Type | Query Setup

Employee Plus Order X

Employees

*

ID

EmployeeNumber

Employee

EmployeeHatSize

EmployeeSupervisor

Orders

*

ID

Product

OrderNumber

ActualCharge

ShippingCharge

Shipper

Purchaser

Employee

Field: Employee OrderNumber | | | | |

Table: Employees Orders | | | | |

Sort: | | | | | |

Show: ☒ ☒ ☐ ☐ | | | |

Criteria: | | | | | |

or: | | | | | |

board Sort & Filter Records

Employee Plus Order Employees

ID	EmployeeNum	Employee	EmployeeHat	EmployeeSup
5	7622	Jackie Blue	7.4	Tyre Pyle
2	377	Jay Byrd	7.9	Roy Poole
10	687	Jim Dandy	6.8	Gina Rosetti
3	3777	Julie Boole	7.1	Gina Rosetti
8	3455	Marjorie Taylor	5.5	Gina Rosetti
1	2334	Tammy Hall	8.9	Tyre Pyle
*(New)				

board Sort & Filter Records Find Text Formattir

Employee Plus Order Orders

ID	Product	OrderNumbe	ActualCharge	ShippingChar	Shipper	Purchaser	Employee	Click to Add
11	Cabbage Bag	110	\$33.09	\$4.19	FedEx	Sam Neil		
10	Cabbage Hat	109	\$5.60	\$3.00	FedEx	Tammy Grimes		
5	Cabbage Pot	104	\$19.50	\$4.00	FedEx	Sean Connery	Jackie Blue	
6		105	\$16.77	\$4.50	Purolator	Tammy Grimes	Jackie Blue	
2	Cabbage Bag	101	\$0.99	\$0.87	Purolator	Wil Smith	Jay Byrd	
3	CabbageBag	102	\$2.00	\$0.98	Purolator	Sam Neil	Julie Boole	
8	Cabbage Hat	107	\$7.88	\$2.00	UPS	Ray Theon	Marjorie Taylor	
9	Cabbage Hat	108	\$8.99	\$1.00	Purolator	Ray Theon	Tammy Hall	
1	Cabbage Bag	100	\$1.49	\$0.39	UPS	Sam Neil	Tammy Hall	
7	Cabbage Hat	106	\$8.77	\$4.00	UPS	Tammy Grimes	Tammy Hall	
4	Cabbage Pot	103	\$44.77	\$1.99	FedEx	Tim Curry	Tammy Hall	
*(New)								

Join Properties

Left Table Name: Employees Right Table Name: Orders

Left Column Name: Employee Right Column Name: Employee

☒ 1: Only include rows where the joined fields from both tables are equal.

☐ 2: Include ALL records from 'Employees' and only those records from 'Orders' where the joined fields are equal.

☐ 3: Include ALL records from 'Orders' and only those records from 'Employees' where the joined fields are equal.

OK Cancel New

board Sort & Filter

Employee Plus Order

Employee	OrderNumbe
Tammy Hall	100
Jay Byrd	101
Julie Boole	102
Tammy Hall	103
Jackie Blue	104
Jackie Blue	105
Tammy Hall	106
Marjorie Taylor	107
Tammy Hall	108

Employee that has no sales does not appear in Inner Join. Nor do sales that have no employee listed.

Sort & Filter					Records	
ID	EmployeeNum	Employee	EmployeeHat	EmployeeSup		
5	7622	Jackie Blue	7.4	Tyre Pyle		
2	377	Jay Byrd	7.9	Roy Poole		
10	687	Jim Dandy	6.8	Gina Rosetti		
3	3777	Julie Boole	7.1	Gina Rosetti		
8	3455	Marjorie Taylor	5.5	Gina Rosetti		
1	2334	Tammy Hall	8.9	Tyre Pyle		
*(New)						

Sort & Filter										Records		Find		Text Formatting	
ID	Product	OrderNumbe	ActualCharge	ShippingChar	Shipper	Purchaser	Employee	Click to Add							
11	Cabbage Bag	110	\$33.09	\$4.19	FedEx	Sam Neil									
10	Cabbage Hat	109	\$5.60	\$3.00	FedEx	Tammy Grimes									
5	Cabbage Pot	104	\$19.50	\$4.00	FedEx	Sean Connery	Jackie Blue								
6		105	\$16.77	\$4.50	Purolator	Tammy Grimes	Jackie Blue								
2	Cabbage Bag	101	\$0.99	\$0.87	Purolator	Wil Smith	Jay Byrd								
3	CabbageBag	102	\$2.00	\$0.98	Purolator	Sam Neil	Julie Boole								
8	Cabbage Hat	107	\$7.88	\$2.00	UPS	Ray Theon	Marjorie Taylor								
9	Cabbage Hat	108	\$8.99	\$1.00	Purolator	Ray Theon	Tammy Hall								
1	Cabbage Bag	100	\$1.49	\$0.39	UPS	Sam Neil	Tammy Hall								
7	Cabbage Hat	106	\$8.77	\$4.00	UPS	Tammy Grimes	Tammy Hall								
4	Cabbage Pot	103	\$44.77	\$1.99	FedEx	Tim Curry	Tammy Hall								
*(New)															

Join Properties

Left Table Name

Employees

Right Table Name

Orders

Left Column Name

Employee

Right Column Name

Employee

☐ 1: Only include rows where the joined fields from both tables are equal.
 ☒ 2: Include ALL records from 'Employees' and only those records from 'Orders' where the joined fields are equal.
 ☐ 3: Include ALL records from 'Orders' and only those records from 'Employees' where the joined fields are equal.

OK

Cancel

New

Employee	OrderNumbe
Tammy Hall	100
Tammy Hall	103
Tammy Hall	106
Tammy Hall	108
Jay Byrd	101
Julie Boole	102
Jackie Blue	104
Jackie Blue	105
Marjorie Taylor	107
Jim Dandy	

Left Join includes the Employee that has no sales, but not the Sales that have no Employee Listed.

ID	EmployeeNum	Employee	EmployeeHat	EmployeeSup
5	7622	Jackie Blue	7.4	Tyre Pyle
2	377	Jay Byrd	7.9	Roy Poole
10	687	Jim Dandy	6.8	Gina Rosetti
3	3777	Julie Boole	7.1	Gina Rosetti
8	3455	Marjorie Taylor	5.5	Gina Rosetti
1	2334	Tammy Hall	8.9	Tyre Pyle
*(New)				

ID	Product	OrderNumbe	ActualCharge	ShippingChar	Shipper	Purchaser	Employee	Click to Add
11	Cabbage Bag	110	\$33.09	\$4.19	FedEx	Sam Neil		
10	Cabbage Hat	109	\$5.60	\$3.00	FedEx	Tammy Grimes		
5	Cabbage Pot	104	\$19.50	\$4.00	FedEx	Sean Connery	Jackie Blue	
6		105	\$16.77	\$4.50	Purolator	Tammy Grimes	Jackie Blue	
2	Cabbage Bag	101	\$0.99	\$0.87	Purolator	Wil Smith	Jay Byrd	
3	CabbageBag	102	\$2.00	\$0.98	Purolator	Sam Neil	Julie Boole	
8	Cabbage Hat	107	\$7.88	\$2.00	UPS	Ray Theon	Marjorie Taylor	
9	Cabbage Hat	108	\$8.99	\$1.00	Purolator	Ray Theon	Tammy Hall	
1	Cabbage Bag	100	\$1.49	\$0.39	UPS	Sam Neil	Tammy Hall	
7	Cabbage Hat	106	\$8.77	\$4.00	UPS	Tammy Grimes	Tammy Hall	
4	Cabbage Pot	103	\$44.77	\$1.99	FedEx	Tim Curry	Tammy Hall	
*(New)								

Join Properties

Left Table Name: Employees
Right Table Name: Orders

Left Column Name: Employee
Right Column Name: Employee

☐ 1: Only include rows where the joined fields from both tables are equal.

☐ 2: Include ALL records from 'Employees' and only those records from 'Orders' where the joined fields are equal.

☒ 3: Include ALL records from 'Orders' and only those records from 'Employees' where the joined fields are equal.

OK Cancel New

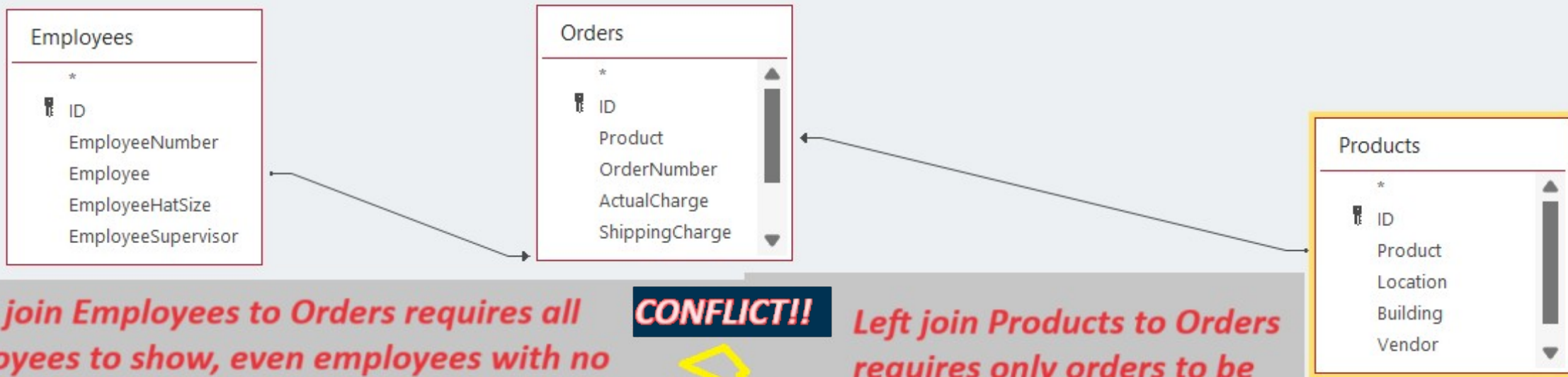
Employee	OrderNumbe
Tammy Hall	100
Jay Byrd	101
Julie Boole	102
Tammy Hall	103
Jackie Blue	104
Jackie Blue	105
Tammy Hall	106
Marjorie Taylor	107
Tammy Hall	108
	109
	110

Right Join has the sales that have no employee listed, but not the Employee with no sales.

Knock-on Effect of Changing Joins

- If you alter a relationship in the master table, it effects any new queries that you make...
- ...but it does not apply to queries you have already made.

Complex Conflict OR Why You Should Alter Joins With Care!



Right join Employees to Orders requires all employees to show, even employees with no sales. Creates extra row with empty order cell.

CONFLICT!!

Left join Products to Orders requires only orders to be displayed with full cells.

[illegible]

Nesting Queries Prevents This Kind of Issue

Employees	
*	
ID	
EmployeeNumber	

Orders	
*	
ID	
Product	
OrderNumber	

Products	

Microsoft Access

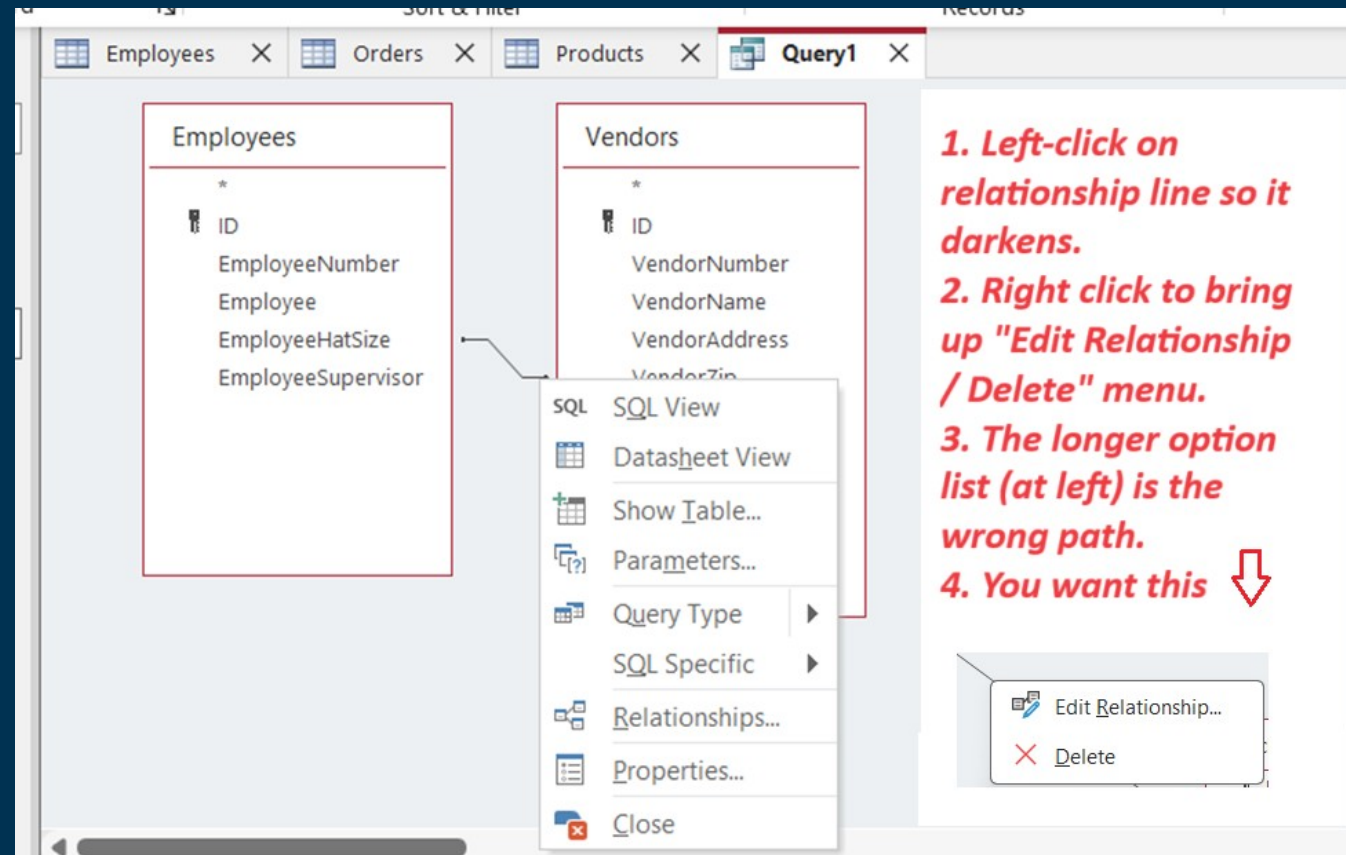
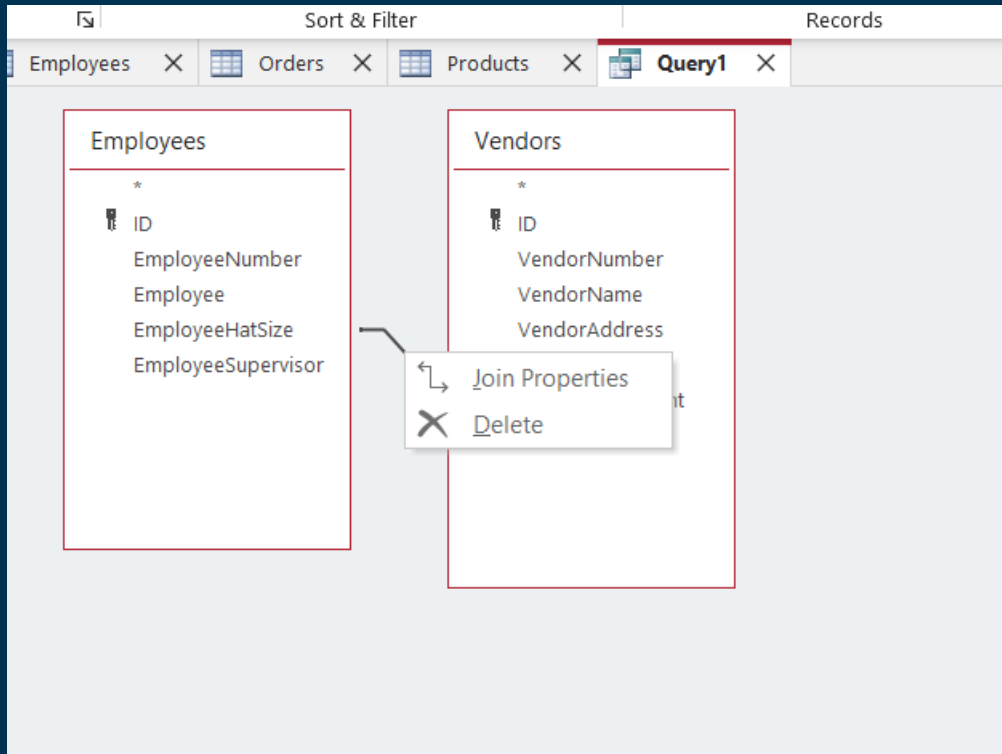


The SQL statement could not be executed because it contains ambiguous outer joins. To force one of the joins to be performed first, create a separate query that performs the first join and then include that query in your SQL statement.

OK

Help

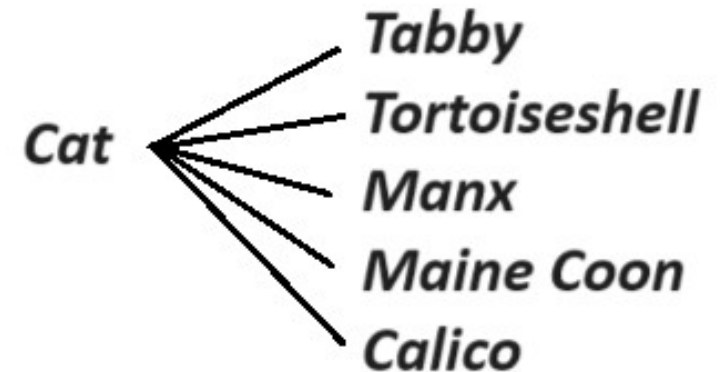
Delete Bad Joins in the Relation Field



3 Types of Relationship

One-To-Many

- A query usually has a one-to-many flow, as most queries are usually trying to organize large amounts of information into a smaller number of categories.
- Here, in a one-to-many configuration, a pet can only be of one type.



One-To-One

- There could only be one relation for each pair of items. This is not as common in a database as a one-to-many. If you have a one-to-one in a single table, it might be an opportunity to split the table into separate tables, since you have two columns each with unique values.

Officer	Title
John	Treasurer
Roy	CTO
Dina	CEO
Mr. Puddles	Office Cat
Pierre	Chef

Next time....

- Aggregate Functions and Totals
- Forms

Thanks For Watching!

- Relationship Diagrams at Query and Database/Schema Level
- Deleting a Relationship at Query Level
- Results of a Bad Join
- One-To-Many, One-To-One, Many-To-Many Relationships
- One-To-One Relationship – Opportunity for Table Split?
- Reports and Suppressing Duplicates

But be sure the join flows in the correct direction?

One-To-One And Rationalizing Tables

One-To-One

- There might only be one relation for each pair of items. This is not as common in a database as a one-to-many. If you have a one-to-one in a single table, it might be an opportunity to split the table into separate tables, since you have two columns each with unique values.

Officer	Title
John	Treasurer
Roy	CTO
Dina	CEO
Mr. Puddles	Office Cat
Pierre	Chef

- A table with two columns, neither of which are primary keys

PrimaryKey	ExecutiveTitle	ExecutiveName	ExcecutiveHomeAddress	ExecutiveLicensePlate	ExecutivePayCode	ExecutiveOfficeNumber
1	CEO	Jules Hogg	12 Bigman Ave.	JKL333	JP99	1201
2	CTO	Royal Poole	44 Wynding Waye	NMF3849	LK8	1219
3	Chief Counsel	Samson Ito	7 W. 8th St	NJH31	LK8	1205
4	VP AOR	Lina Ford	75 Runna Way	NJF381	NB3	1099
5	Legislative Liason	Zella Abbug	7 W. 8 th St	BUF382	DF8	1944
6	Lobbyist	Matrick Poinihan	88 East 88 th st.	BUF382	JJ4	1944

Each value in each of these two columns is unique and matches one-to-one with a value in the other column.

All the other columns have repeating values because of shared offices, pay codes, cars, etc.

If you wanted to update any corporate or personal information, you would need to load and rewrite all elements of both types of info.

PrimaryKey	ExecutiveTitle	ExecutiveName	ExcecutiveHomeAddress	ExecutiveLicensePlate	ExecutivePayCode	ExecutiveOfficeNumber
1	CEO	Jules Hogg	12 Bigman Ave.	JKL333	JP99	1201
2	CTO	Royal Poole	44 Wynding Waye	NMF3849	LK8	1219
3	Chief Counsel	Samson Ito	7 W. 8th St	NJH31	LK8	1205
4	VP AOR	Lina Ford	75 Runna Way	NJF381	NB3	1099
5	Legislative Liason	Zella Abbug	7 W. 8 th St	BUF382	DF8	1944
6	Lobbyist	Matrick Poinihan	88 East 88 th st.	BUF382	JJ4	1944

Finding two columns with one-to-one correspondences, that are not primary keys, may be an opportunity to divide one table into two!

One Table Split Into Two

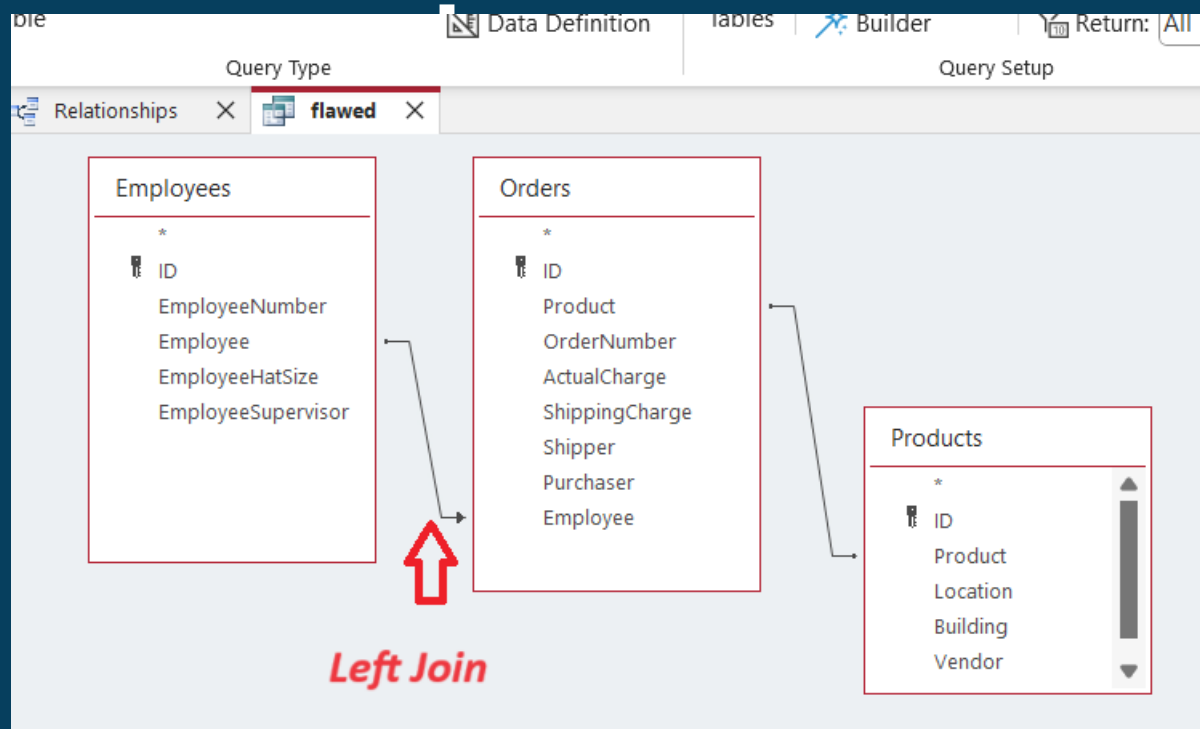
- Now you have two tables, so you are able to update personal information on executives without re-writing corporate info.

PrimaryKey	ExecutiveTitle	ExecutiveName	ExcecutiveHomeAddress	PrimaryKey	ExecutiveTitle	ExecutiveLicensePlate	ExecutivePayCode	ExecutiveOfficeNumber
1	CEO	Jules Hogg	12 Bigman Ave.	1				
2	CTO	Royal Poole	44 Wynding Waye	2	CEO	JKL333	JP99	1201
3	Chief Counsel	Samson Ito	7 W. 8th St	3	CTO	NMF3849	LK8	1219
4	VP AOR	Lina Ford	75 Runna Way	4	Chief Counsel	NJH31	LK8	1205
5	Legislative Liason	Zella Abbug	7 W. 8 th St	5	VP AOR	NJF381	NB3	1099
6	Legislative Liason	Matrick Poinihan	88 East 88 th st.	6	Legislative Liason	BUF382	DF8	1944
				7	Legislative Liason	BUF382	DF8	1944

Green is shared column between two tables.

A single table split in two after finding a one-to-one relation between two columns with unique values. Now if the personal details need updating, there is no need to disturb the table with only corporate information.

Table 'flaw' shows how left join problem



Microsoft Access



The SQL statement could not be executed because it contains ambiguous outer joins. To force one of the joins to be performed first, create a separate query that performs the first join and then include that query in your SQL statement.

OK

Help